Appendix III

Assessment of the Twenty-Three Statewide Planning Factors

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Introduction

The Indiana Department of Transportation (INDOT) statewide transportation planning regulations to implement the Intermodal Transportation Efficiency Act of 1991, as stated in § 450.208 *Statewide Transportation Planning Process*, requires that each State explicitly consider, analyze as appropriate and reflect in planning process products the twenty-three (23) statewide planning factors in conducting its continuing statewide transportation planning process.

This section provides an overview of the statewide planning factors and a discussion of how INDOT is addressing each factor, or what activities are underway to better address a specific factor in the future.

Planning Factor 1

The transportation needs (strategies and other results) identified through the management systems required by 23 U.S.C. 303;

- *Indiana's statewide transportation planning process is being developed to fully integrate the six (6) management systems and traffic monitoring system into the overall development structure. INDOT went through a reorganization in 1993 to place all ISTEA related activities under the Office of Intermodal Transportation and Planning. This reorganization placed all management systems and the statewide planning process under a single Deputy Commissioner. The pavement, bridge, congestion, safety, and traffic monitoring systems are under the responsibility of the Division of Roadway Management. The Public Mass Transportation Facilities and Equipment Management System is the responsibility of the Intermodal Transportation Division. The Transportation Planning Division, responsible for development of the Statewide Multimodal Transportation Plan, is developing the Intermodal Management System. All management systems work plans have been submitted to the FHWA/FTA in a single unified work program in September 1994. Currently, only the pavement and bridge management systems are sufficiently developed to provide input into the planning and programming system.*

Planning Factor 2

Any federal, state, or local energy use goals, objectives, programs, or requirements;

- *INDOT is aware of the importance of conserving fuel, and increasing the effectiveness of the state's transportation system for several years. One of the ways in which INDOT supports energy efficient transportation is through increased emphasis on public transportation as an alternative to single occupant automobiles. INDOT also supports non-motorized modes of transportation, chiefly walking and bicycling, particularly for short trips. INDOT has been an active member of the Indiana Energy Policy Forum since 1991.*

  The department's Multimodal Transportation Policy Plan notes that "INDOT will contribute to energy conservation efforts by promoting efficiency in all modes of travel and by encouraging the most efficient use of transportation systems." Seven specific strategies have also been designed to contribute to this policy goal. The INDOT Policy Plan addresses the issues in the U.S. Energy Policy Act of 1992 regarding the efficient use of the transportation system.

  The Indiana Department of Commerce estimates that transportation accounts for twenty-three percent (23%) of the energy used in Indiana, and that over ninety-nine percent (99%) of that energy is derived from petroleum. In keeping with federal energy policy, all state-owned vehicle fleets are to begin including some alternative fuels. By 1996, ten percent (10%) of new vehicle purchases must be alternative fuel vehicles, and by the year 2000, the proportion climbs to seventy-five percent (75%). The State of Indiana has established the goal that five percent (5%) of its 1995 model-year purchases will be alternatively fueled vehicles. The present state-owned fleet includes twelve (12) vehicles that use ethanol (E-85), and INDOT has four (4) vehicles that are fueled with compressed natural gas. In 1993, INDOT began using 10,000 gallons of soydiesel fuel, a compound of diesel fuel and a soybean derivative.

Planning Factor 3

Strategies for incorporating bicycle transportation facilities and pedestrian walkways in appropriate projects throughout the state;

- *More than ever, INDOT is aware (or becoming aware) of the importance of non-motorized forms of transportation. Travel by bicycle and on foot needs to be accommodated in "traditional" transportation projects where it is*

reasonable and where relative safety can be assured. Though not automatic, INDOT project engineers are being asked to design wider shoulders for walking and biking in selected urban areas. Selected state highway projects through Indiana communities will now feature sidewalks where none existed before. Where sufficient demand exists, INDOT is removing bridges over abandoned railroads and replacing the structures with concrete box culverts to accommodate rail-to-trail conversions.

Valued for their potential health benefits and positive effects on air quality and overall "quality of life", walking and biking represent the chief non-motorized forms of travel available for both transportation and recreational purposes. INDOT expects emphasis on biking and walking to increase, especially in transportation management areas. Therefore, INDOT is developing policies to respond to this growing interest in pedestrian and bicycle facilities. Procedures can then be created to establish the nature and strength of local demand for non-motorized transportation facilities. Since it is not prudent to add such facilities to all projects, need must be adequately established to justify the additional expenses.

Planning Factor 4

International border crossings and access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation and scenic areas, monuments and historic sites, and military installations;

- *The Indiana Statewide Multimodal Transportation Planning Process explicitly considers access to traffic generators and major distribution routes both in the multimodal policy plan and the development of modal system plans. The identification of a comprehensive range of activity centers and traffic generators was a central element of both the functional reclassification of the roadway system and the identification of routes to be included in the National Highway System (NHS). The pattern of major freight generation and distribution routes is being considered in the INDOT sponsored research "Commodity Flow Studies, Phase I and II" conducted by the Indiana University Transportation Research Center. This multimodal (highway, rail, port, and air freight) study is being used as the base for INDOT's development of an Intermodal Management System.*

  While Indiana does not have any international border crossing, the consideration of international trade is important. International Trade Zones have been established at several Indiana airport and port facilities. Also, the proposed I-69 Mid-Continental Highway linking Canada, the United

States, and Mexico is anticipated to provide a major linkage for international trade.

The Major Corridor Investment-Benefit Analysis System being developed by INDOT as a systems planning tool will explicitly consider both user benefits and economic development benefits of corridor transportation improvements. The evaluation of economic benefits will include tourism related economic impacts.

Planning Factor 5

The transportation needs of non-metropolitan areas (areas outside of Metropolitan Planning Organization planning boundaries) through a process that includes consultation with local elected officials with jurisdiction over transportation;

- *The Indiana Department of Transportation (INDOT) is responsible for transportation planning outside of the state's Metropolitan Planning Areas according to the Federal regulations.*

  The Indiana Department of Transportation District Offices have the lead role for conducting transportation planning in rural areas. This process includes frequent contacts and consultations with local officials. To facilitate the state's partnership process, a series of district public involvement meetings are held annually to ensure full participation of local elected officials, interest groups, and the general public in the project selection and development process.

Planning Factor 6

Any metropolitan area plan developed pursuant to 23 U.S.C. 134 and Section 8 of the Federal Transit Act 49 U.S.C. app. 1607;

- *The Indiana Department of Transportation's statewide multimodal transportation planning process explicitly considers the Metropolitan Planning Organization (MPO) Transportation Plans. The MPO Transportation Plans are included either directly or by reference in the Statewide Long-Range Multimodal Transportation Plan. For the initial preparation of this statewide planning effort, the integration of the MPO plans into the statewide plan has the limitations of two different preparation schedules. The MPO Transportation Plans are being updated to achieve a December 18, 1994, federal mandate, while the statewide plan must be officially certified prior to January 1, 1995. The limitations imposed by the*

two plan development timeframes will be addressed in the continuing development of the statewide plan.

- *INDOT has and will continue to closely work with the MPOs in the development and completion of the metropolitan urbanized area plans. The MPOs have also been involved in the development of INDOT's statewide plan. INDOT recently initiated a new process of MPO, district, and central office cooperation which will improve the communication and coordination of all state and MPO planning activities.*

Planning Factor 7

Connectivity between metropolitan planning areas within the State and with metropolitan planning areas in other states;

- *The Indiana Statewide Multimodal Transportation Planning Process explicitly considers the connectivity between metropolitan planning areas both within the state and in adjacent states. The connectivity between metropolitan planning areas is a central element of both the highway functional reclassification effort and the identification of routes for the National Highway System. Coordination efforts with AASHTO and the FHWA Regions Four and Five were undertaken to insure a compatible level of connectivity between metropolitan planning areas in Indiana and those within our neighboring states. Multimodal planning connectivity between metropolitan planning areas has been addressed in varying degrees in the modal transportation system plans and in local master plans. Passenger enplanements between major metropolitan areas was considered in the Indiana State Aviation System Plan Update (1994) and is undergoing further research for publication in 1995. The connectivity of metropolitan areas regarding intercity bus service has been addressed in the 1993 study Further Analysis of Intercity Bus Transit Needs in Indiana – Indiana University Transportation Research Study. Continued analysis will occur in the Indiana State Rail Plan Update and the Indiana Department of Transportation's Intermodal Management System which will focus on intermodal connectivity in the state's urban areas.*

Planning Factor 8

Recreation travel and tourism;

- *In the area of recreational travel and tourism, INDOT is responsible for all state maintained and operated highways. The responsibilities include road construction and repairs, traffic monitoring, and rest areas. These responsibilities have major impacts on outdoor recreation by providing access*

to outdoor recreational areas and rest areas that provide picnic facilities and travel/tourism information for visitors and Indiana residents. INDOT is also responsible for maintaining state roads within Indiana Department of Natural Resources properties. In addition, INDOT maintains a total of thirty-four (34) rest areas. These rest areas are mainly used by interstate and intrastate long-distance travelers.

INDOT is also responsible for signage on federal and state highways including the design and style of signs such as the Logo and Scenic Byway signage. This signage provides information regarding special interests, food, lodging and fuel and directions for out-of-state visitors.

Planning Factor 9

Any State plan developed pursuant to the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq. (and in addition to plans pursuant to the Coastal Zone Management Act);

- *The purpose of the Federal Water Pollution Control Act is to "Restore and maintain chemical, physical, and biological integrity of the Nation's waters through prevention, reduction, and elimination of pollution." INDOT's principal means of complying with the Clean Water Act is coordination with the resource and regulatory agencies that have primary responsibility for water quality in Indiana. The Indiana Department of Natural Resources requires than an erosion control plan be prepared for construction projects and that the plan be filed with the Indiana Department of Environmental Management. To prepare these plans, INDOT works with the local Soil and Water Conservancy District where each project is located. In addition, the U.S. Army Corps of Engineers mandates Section 404 permits for any dredging or filling of any water body, stream or wetland.*

  The Federal Water Pollution Control Act, amended by the Clean Water Act of 1977 and 1987, is currently pending reauthorization. INDOT supports the position voiced by the American Association of State Highway and Transportation Officials at the hearings on H.R. 3948 in May 1994. Recommended modifications would include clarification of requirements and applicability, water quality as a basis for targeting actions, increased flexibility concerning methods to satisfy compliance requirements, superseding the Coastal Zone Reauthorization passed in 1990 with the new Clean Water Act, and more reasonable and clear schedules for compliance. INDOT and other state agencies will modify procedures as needed to assure compliance with applicable Clean Water Act and Coastal Zone Act regulations.

Planning Factor 10

Transportation system management and investment strategies designed to make the most efficient use of existing transportation facilities (including consideration of all transportation modes);

- *The Indiana Department of Transportation (INDOT) is developing planning and management programs to maximize the efficient use of the existing transportation system. The major elements in this planning and management effort is the development of the six (6) following management systems:*

    1. *Pavement Management System;*
    2. *Bridge Management System;*
    3. *Congestion Management System;*
    4. *Safety Management System;*
    5. *Public Mass Transportation Facilities and Equipment Management System, and;*
    6. *Intermodal Management System.*

  The six management systems supported by the department's transportation policy plan will identify projects and programs to increase the efficient use of existing transportation facilities. Highway projects, transit projects, and associated programs will be programmed for implementation in the Indiana Statewide Transportation Improvement Program. Projects and programs targeted towards other modes will be an outgrowth of the Congestion, Safety, and Intermodal Management Systems and will be programmed for implementation through a variety of public and private sector actions.

Planning Factor 11

The overall social, economic, energy, and environmental effects of transportation decisions (including housing and community development effects on the human, natural and manmade environments);

- *The overall social, economic and environmental effects of transportation investment decisions are considered by the Indiana Department of Transportation in accordance with National Environmental Policy Act (NEPA) guidelines. Planning tools currently under development by INDOT, coupled with management systems information, will also provide an opportunity to measure the effects of investment decisions on a larger scale for long-range multimodal systems planning and development programs.*

INDOT will also continue to work closely with the Indiana Department of Environmental Management, the Indiana Department of Natural Resources and the Indiana Department of Commerce in the development of long-range transportation plans and projects.

Planning Factor 12

Methods to reduce traffic congestion and to prevent traffic congestion from developing in areas where it does not yet occur, including methods which reduce motor vehicle travel, particularly single-occupant motor vehicle travel;

- *Development of the Indiana Congestion Management System (CMS) began in June 1993. The Joint Highway Research Project of Purdue University and the Indiana Department of Transportation undertook a study to develop a framework of a prototype CMS for Indiana. An advisory committee was set up to guide the study. This committee includes representatives from Indiana Metropolitan Planning Organizations (MPOs), INDOT, the Federal Highway Administration (FHWA), and the Indiana Department of Environmental Management (IDEM). The study involved a nationwide survey of state transportation agencies, a mail-back survey of Indiana MPOs, personal interviews with MPO officials, and a comprehensive literature review. Under this study, a prototype CMS has been developed. This plan includes all activities that should be completed in developing the Indiana CMS, which agencies should be involved in the process, recommended performance measures and standards, and a procedure to identify and quantify roadway congestion. Using these guidelines, the congestion management agencies (which include INDOT and the Indiana MPOs) would develop management systems specific to their jurisdictions of responsibility.*

  Congestion Management Agencies. *The Indiana CMS will have two components: an urban CMS and a rural CMS. The urban CMS component will be developed by each of Indiana's twelve (12) MPOs and will cover areas under the jurisdiction of each MPO. The rural CMS will be developed by INDOT's Division of Roadway Management and Planning and will include all areas not covered by the MPOs. Specific activities that need to be performed are discussed in the Congestion Management Plan. Thus, INDOT and the MPOs will be defined as Congestion Management Agencies (CMAs).*

  Congestion Management Committees. *As an initial activity in the development of individual CMS, each congestion management agency will appoint a CMS committee. The agencies that should be represented on this*

committee are mentioned in the prototype statewide Congestion Management Plan (CMP). The study advisory committee set up for developing the CMP will continue to serve as the statewide CMS Committee.

Define Target CMS Networks. *The CMS committees will define their region's target CMS network. All elements and links on the network will be identified and classified according to the guidelines set in the CMP. The definition of the target statewide network has already been performed as indicated in the CMP. The specific details of the urban networks will be determined by October 1994.*

Establish Program Data Collection and System Monitoring. *Each region will implement a comprehensive data collection and system monitoring program. A plan for this program detailing geographic areas to be covered, data collection responsibilities, timeframes, data analysis processes, and funding sources, will be developed as part of the initial activities of developing the CMS. This activity will be coordinated with INDOT's data collection program and should follow the guidelines indicated in the CMP. Based on this plan, data collection and system monitoring activities should be implemented by October 1995.*

Status Report on Prevailing Regional Congestion Levels. *Performance measures have been identified and standards have been established as part of the CMS Study and are discussed in the CMP. The CMAs will use these performance indicators and standards to identify and quantify recurring and non-recurring congestion in their respective areas roadway and transit networks. Based on this assessment, a report detailing each region's congestion levels will be prepared. This report will be due whenever the CMS is updated, which is every three years for Transportation Management Areas (TMAs) and every five (5) for other regions, starting from October 1995.*

Report on Congestion Mitigation. *A report detailing all strategies identified as appropriate congestion mitigation activities will be prepared. This report will include agencies responsible for the implementation and enforcement of strategies, timeframes for implementation, and probable funding sources. An implementation schedule will also be included in this report. All strategies identified by the CMS shall conform with the regional and statewide planning processes, such as, the MPO Transportation Improvement Programs (TIPs) and the Indiana Statewide Transportation Improvement Program (INSTIP). This report will be due for the first time in October 1995, and thereafter whenever the CMS is updated.*

Planning Factor 13

Methods to expand and enhance appropriate transit services and to increase the use of such services (including commuter rail);

- *The Indiana Department of Transportation (INDOT) encourages the use of Public Transportation as a means to reduce congestion and auto emissions.*

  INDOT considers the following when developing transit planning: all forms of high-occupancy and shared-ride services, including light and heavy rail, bus, car and vanpools, preferential treatment for high-occupancy vehicles, employer-sponsored programs, other forms of ridesharing and non-motorized travel.

  INDOT also encourages better coordination of transit operations regions where service overlaps and gaps in coverage exist. INDOT is currently working with local units of government to investigate all options for improving service when possible.

  INDOT is also concerned with the ability of Public Transportation to adapt to the changes in demographics and new innovations. We encourage local public transit to consider innovative solutions to such problems as aging capital stock, declining ridership, and farebox revenues. These solutions could include contracting out, "pulse" scheduling, paratransit, and peak hour pricing.

Planning Factor 14

The effect of transportation decisions on land use and land development, including the need for consistency between transportation decisionmaking and the provisions of all applicable short-range and long-range land use and development plans (analyses should include projections of economic, demographic, environmental protection, growth management and land use activities consistent with development goals and transportation demand projections);

- *INDOT has under varying degrees of completion three (3) planning research studies to address the land use planning factor identified above. These studies are either in the proposal stage or underway. The three land use related studies include; an Access Control Study (proposed); a study on the Guidelines For Traffic Impact Analysis of Development Along State*

Highways (complete), and; Integrating Land Use Allocation Models With Travel Forecasting Models (in progress).

***Access Control Study**: In an effort to maintain the operating capacity and functional integrity of state highways, some states have chosen to actively control access to their highways. The absence of adequate control results in vehicles randomly entering and exiting highways, thereby reducing the ability of the roadway to safety carry the intended volumes of traffic, which in turn, diminishes the route's economic viability and safety. INDOT has jurisdiction over state highways but does not exercise the degree of control it could given a sound access control policy.*

The intended product of the proposed Access Control Study would be a series of policies that would enable INDOT to control access to state highways in a consistent, objective, legal and reasonable manner. A phased implementation could be prescribed to provide mileposts by which progress toward full enactment could be gauged. The benefits would include (1) a formal policy program where one does not now appear to exist; (2) a legally enforceable tool to back decisions regarding access; (3) improved traffic flow on state highways, especially non-interstate arterials, and (4) a better separation of through traffic and local traffic

***Guidelines For Traffic Impact Analysis of Development Along State Highways.** This project sought an effective and expeditious procedure that would balance property owners' rights of access with the traveling public's expectation of safety and efficiency. In order to formulate a procedure that was appropriate for Indiana, several research tasks were undertaken as part of this project. A survey of forty-two (42) states found a wide variety of approaches to traffic impact analysis (TIA) by state transportation agencies, reflecting the rate at which new development was taking place and the different transportation management philosophies in the various states. To address the problem of inadequate data to use recently proposed models to analyze "pass-by trips", a method of using license plate surveys at existing sites was devised and demonstrated with surprising success. To make the most effective use of the Institute of Engineers' large national Trip Generation data base, a means of combining those data with locally-collected data was devised. To provide policymakers in Indiana with a background for considering traffic impact fees, a brief review of such fees has been provided. Finally, an "Applicant's Guide" and a "Reviewer's Guide" have been assembled and published as separate documents to accomplish the*

two central objectives of this project: (1) To establish a streamlined TIA procedure that is uniform, but flexible, and that requires of a developer only that information needed to complete a TIA of appropriate scope; (2) To produce a concise description of the TIA procedure that can be easily distributed to local public agencies throughout Indiana, in an effort to make TIA a routine part of any land development activity, for the benefit of the developer, the local and state authorities, and --- most of all --- the traveling public. The applicant's and reviewer's guides were produced through the cooperative efforts of the researchers, INDOT representatives, and a panel of consulting engineers who regularly work on behalf of developers in Indiana.

Integrating Land Use Allocation Models With Travel Forecasting Models. *This in progress research study will evaluate new advances in land use allocation forecasting models for potential implementation using INDOT's TRANPLAN travel demand modeling system. This research project is intended to build upon previous and ongoing research into travel demand modeling. This project will (1) review the work conducted in the Kokomo/US 31 Corridor Study related to allocation models; (2) make a formal review of the existing work conducted by the Urban Analysis Group in developing interfaces between the TRANPLAN model and the Integrated Transportation-Land Use Planning's Disaggregate Residential Allocation Model (DRAM) and Employment Allocation Model (EMPAL) will be performed. These reviews will be supplemented with an evaluation of other modeling work such as the Highway Land-Use Forecasting Model as well as newer allocation models (including recent European work) that might be feasible. Based upon the reviews and hopefully hands-on experimentation, the feasibility of developing a standard land use allocation model as part of the Indiana TRANPLAN package will be determined. At this time, a sophisticated land use allocation model with intensive input data requirements may not be warranted or feasible and less complex procedures may fulfill the department's needs.*

Planning Factor 15

Strategies for identifying and implementing transportation enhancements where appropriate throughout the State;

- *This planning factor indirectly concerns bicycle and pedestrian forms of travel or can be interpreted to apply to pedestrian and bicycle planning. Indiana's Transportation Enhancement Activities (TEA) Program became fully operational in 1993. Sixty-five (65) TEA projects, worth in excess of*

$17.6 million in federal funds, were approved and announced in the fall by the Governor of Indiana. Evaluations by a joint committee or representatives from the Indiana Department of Commerce, the Indiana Department of Natural Resources, the Metropolitan Planning Organization (MPO) Council, and INDOT selected the successful proposals from a host of program applications. Thirty (30) projects involve land purchases for bikeways or trails, construction of trails or pedestrian/bikeways, sidewalk installations, bridge reconstruction for exclusive pedestrian/bicycle use, or installation of bicycle racks. In 1994, the "Enhancement" program was revamped and significantly improved. Through the concerted efforts of the TEA committee that now includes the Indiana Association of Cities and Towns, the Indiana Association of Counties and the FHWA, the TEA application was modified to increase objectivity and improve the project selection process.

Planning Factor 16

The use of innovative mechanisms for financing projects, including value capture pricing, tools, and congestion pricing;

- *The Indiana Department of Transportation's transportation policy plan states that the department will encourage innovative solutions to achieve more efficient and effective services. These innovative solutions will include (but not be limited to) performance analyses, return on investment analyses, funding for creative intermodal transportation solutions whenever appropriate, and innovative technologies.*

  The use of innovative mechanisms/alternatives for financing projects was thoroughly examined and documented in an INDOT July 1989 study, The Economic Impacts of Highway Improvements in Southwest Indiana. Potential general revenue sources/non-user fees included property taxes, income taxes, sales taxes, severance taxes, lottery proceeds, and advertising fees. Potential benefit fees/assessments included impact exactations, special assessments, service charges, and tax increment financing. Potential user fees included tool roads, vehicle registration fees, motor fuel taxes, weight distance taxes, and graduated truck registration fees. Potential private participation/financing arrangements included private donations, joint development (e.g., cost sharing, developer financing, negotiations, transportation corporation, and road districts), privatization (e.g., private ownership, leasing/selling existing facilities/rights, and land banking), traditional debt financing techniques (e.g., current revenues, general obligation bonds, revenue bonds, special uses of general obligation bonds,

and revenue), public/private debt financing techniques (e.g., tax exempt lease/purchases, sale and leaseback, vendor or developer financing, and privatization), and creative bond debt financing techniques (e.g., zero coupon bonds, variable rate bonds, put option bonds, interest rate swaps, and futures).

Planning Factor 17

Preservation of rights-of-way for construction of future transportation projects, including identification of unused rights-of-way which may be needed for future transportation corridors, identification of those corridors for which action is most needed to prevent destruction or loss (including strategies for preventing loss of rights-of-way);

- *INDOT is currently pursuing a program of protective buying to preserve transportation corridors and interchange access points. This program is designed to protect the department's investments in transportation facilities throughout Indiana.*

  This planning factor indirectly concerns bicycle and pedestrian forms of travel or can be interpreted to apply to pedestrian and bicycle planning. INDOT is taking positive steps toward preserving rights-of-way for transportation projects, specifically non-motorized transportation. Abandoned railroad corridors in Indiana have languished for years. Typically, the affected land would either revert to adjacent landowners or remain vacant, becoming a linear eyesore. INDOT has demonstrated its support for rail-to-trail conversions through the approval of the Cardinal Greenway, the Whitewater Canal project, a Hendricks County B&O Railroad Corridor project, and various other similar proposals during the F.Y. 1993 series of TEA project reviews.

  In 1994, the Transportation Enhancement Review Committee was informed that INDOT places a higher priority on acquiring abandoned railroad corridors than on any other category of TEA project. INDOT has also started an effort to help abandoned railroad right-of-way by accommodating non-motorized travel at a few former railroad underpasses where highway bridges are being removed. In these locations, INDOT will consider installation of concrete box culverts to help maintain continuity for anticipated trail uses. INDOT's Multimodal Transportation Policy Plan is expected to solidify this practice where warranted.

Planning Factor 18

Long-range needs of the State transportation system for movement of persons and goods;

- *The Indiana Statewide Multimodal Transportation Planning Process will consider the long-range needs of the state transportation system. The policy planning elements making up this current statewide plan clearly identify the development of a systems plan to identify the current condition of the system and establish expansions and improvements to support the states' economy and growth in travel demand. A two-year plan development schedule is envisioned to provide support to the required three year update of the MPOs not in air quality attainment status. Currently work is underway in developing system level planning tools to support the system-planning process. Of note is the development of the "Major Corridor Investment Benefit Analysis System." This planning support tool will integrate a statewide travel demand model to provide an estimate of the economic rate of return on corridor transportation investments. Additional system planning activities are anticipated at both the INDOT District level and with the cooperative transportation planning process carried out in the MPOs Metropolitan Planning Areas under the leadership of the MPOs.*

Planning Factor 19

Methods to enhance the efficient movement of commercial motor vehicles;

- *The efficient movement of commercial vehicles is an underlying consideration in the normal selection and development process for highway transportation improvements. Project design data in the form of the amount and composition of truck traffic is typically considered in the project development process.*

  In addition to these typical procedures that enhance commercial vehicle movement, INDOT has conducted research studies on the identification of commodity flows typically carried by commercial vehicles. The Phase I and Phase II Commodity Flow Research Study conducted by the Indiana University Transportation Research Study has assigned the volume of specific commodity movements to a statewide network of highway facilities. This information was used to refine the National Highway System proposal.

  Drawing upon the research work performed in the Commodity Flow Study, the Intermodal Movement System will develop strategies to increase the efficiency of commercial motor vehicles. An Intermodal Advisory Task Force will provide insight and guidance in the development of these strategies.

Planning Factor 20

The use of life-cycle costs in the design and engineering of bridges, tunnels, or pavements;

- *One major element of ISTEA is the requirement for Major Investment Studies (MIS). These studies will support decisions on significant transportation investments and provide alternative strategies. The MIS will provide cost, benefits and impacts of the alternatives as a basis for evaluation. A major component of the MIS is the consideration of direct and indirect costs of alternatives. The life-cycle costs will determine the overall estimated cost for a particular alternative over a time period. These life-cycle costs will correspond to the life of the alternative that will include direct and indirect initial costs plus any periodic or continuing operation and maintenance costs.*

  The use of life-cycle costs is an integral element of INDOT's management systems development to make the most efficient use of existing facilities including transit vehicles, airport pavements, highway pavements, bridges, and tunnels. This analysis will be conducted in the INDOT management systems to evaluate the condition of the system, to identify deficiencies and to test alternative improvement options. This analysis will be used in the development of the Long-Range Multimodal Transportation Plan for evaluating transit vehicle acquisitions, pavement and bridge replacement, highway capacity, safety, and related system deficiencies. The use of life-cycle costs will also provide a systematic approach to maximizing benefits, minimizing costs, and ranking and prioritizing projects.

Planning Factor 21

The coordination of transportation plans and programs developed for metropolitan planning areas of the State under 23 U.S.C. 134 and Section 8 of the Federal Transit Act. with the statewide transportation plans and programs developed under this subpart, and the reconciliation of such plans and programs as necessary to ensure connectivity within transportation systems;

- *The Indiana Department of Transportation (INDOT) is currently working with the Metropolitan Planning Organizations (MPOs), Regional Planning Organizations and county and local planning organizations in developing a comprehensive transportation planning process. These planning organizations have, to varying degrees overlapping authority in the development of transportation plans. INDOT is currently*

taking an inventory of these planning units to better understand where cooperative agreements should be considered.

INDOT has developed a public participation process that includes regional transportation planning meetings throughout the state. The purpose of these meetings is to include INDOT and local governmental groups in the transportation planning process. One of the by products of these meetings is the coordination of state and local transportation plans.

INDOT encourages improvements to transportation planning and coordination with land development in urbanized areas. We have worked closely with the MPOs when considering planning transportation improvements, sharing information and providing assistance when requested.

INDOT is also working with other state agencies in the coordination of transportation planning assistance. We currently are working on developing a multi-agency group that will assist in the transportation planning process that will include the MPO areas. This group includes INDOT, the Department of Commerce, the Department of Natural Resources and the Indiana Department of Environmental Management.

Planning Factor 22

Investment strategies to improve adjoining State and local roads that support rural economic growth and tourism development, Federal agency renewable resources management, and multipurpose land management practices, including recreation development;

- *The Intermodal Surface Transportation Efficiency Act stresses that a stronger intergovernmental coordination and cooperation take place in developing a statewide transportation plan. In order to maintain that coordination and cooperation, various state agencies have developed committees to provide guidance in the selection of projects. The agencies consist of INDOT, the Indiana Department of Natural Resources (IDNR), the Indiana Department of Environmental Management (IDEM), and the Indiana Department of Commerce (IDOC). Each of these agencies are currently in the process of developing departmental plans that will address their responsibilities and goals.*

Planning Factor 23

The concerns of Indian tribal governments having jurisdiction over lands within the boundaries of the State.

- *The are no tribal governments with jurisdiction over lands within the boundaries of the State of Indiana..*